



Concord Municipal Light Plant

Interconnection Application and Service Agreement for Residential Facilities with an Inverter Capacity of 167 kW¹ AC and under

Contact Information

Legal Name and address of Interconnecting Customer applicant:

Customer Name (print) _____ Contact Person, if Company _____

Address of Interconnection Facility: _____

Mailing Address, if different from above: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

Alternative Contact Information (e.g., system installation contractor or coordinating company)

Name: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): (same) _____

Facsimile Number: _____ E-Mail Address: _____

Ownership (include % ownership by any electric utility): _____

Facility Information

Concord Municipal Light Plant Account Number (required – *on bill*) _____

Meter Number (required – *on bill*) _____

Panel Make and Model _____ Quantity Used _____

Inverter Manufacturer, Model Name and Number: _____ Quantity Used _____

Is inverter UL1741 Listed? Yes _____ No _____

Maximum Output Power of Inverter: _____ (Watts) @ _____ (Volts AC) Single _____ or Three _____ Phase

Total PV System Output 1 (# of panels x max power/panel (W DC) x CEC inverter efficiency/1,000W/kW): _____ (kW)

Total PV System Output 2 (maximum power output per inverter x # of inverters/1,000W/kW): _____ (kW)

Electrical Contractor: Name, address, phone # and contact name

Energy Source: Solar ☐ Wind ☐ Hydro ☐ Natural Gas ☐ Other _____

Estimated Installation Date: _____ Estimated In-Service Date: _____

Customer Signature

I hereby certify that, to the best of my knowledge, all of the information provided in this application is true and I agree to the Terms and Conditions on the following pages:

Interconnecting Customer Signature: _____ Title (if Company): _____ Date: _____

Please return this document to: Concord Municipal Light Plant, PO Box 1029, 1175 Elm St., Concord, MA 01742

Approval to Install Facility (For CMLP use only)

Installation of the Facility is approved contingent upon the terms and conditions of this Agreement, and agreement to any system modifications, if required (Are system modifications required? Yes _____ No _____).

Company Signature: _____ Title: _____ Date: _____

¹The capacity of a system in kW AC is the lesser of System Output 1 = Capacity (kW DC) x CEC inverter efficiency and System Output 2 = the maximum output power per inverter x number of inverters.

Approval to OPERATE Facility (For CLMP use only)

Installation of the Facility is approved contingent upon the terms and conditions of this Agreement, and agreement to any CMLP or customer system modifications, if required (Are system modifications required? Yes___ No___). If yes, please explain an end of application.

CMLP Signature: _____ Title: _____ Date: _____

Explanation of Modifications, if any:

167 kW and under Generator Interconnection - Terms and Conditions

These terms and conditions set forth interconnection requirements, equipment specifications, and metering arrangements for residential customers who may choose self generation of electric energy using photovoltaic (PV), wind or co-generation electric generating equipment.

- 1) **Permits.** The Interconnecting Customer or his/her installation contractor must contact the Building Department regarding installations to assure permits, if necessary, are obtained.
- 2) **Interconnection and Operation.** The Interconnecting Customer may operate the electricity generation equipment, henceforth defined as “Facility,” and interconnect with Concord Municipal Light Plant’s electrical system only after the Facility is inspected by the Town of Concord’s Wire inspector and after approval for the interconnection has been given by an authorized Concord Municipal Light Plant employee.
- 3) **Right of Inspection.** Concord Municipal Light Plant may, upon reasonable notice and at a mutually convenient time, conduct an inspection of the Facility to ensure that all equipment has been appropriately installed and all electrical connections have been made in accordance with Concord Municipal Light Plant policy. At the Facility, CMLP representatives shall identify themselves to the Interconnecting Customer’s representative, state the object of their visit, and conduct themselves in a manner that will not interfere with the construction or operation of the Facility. Concord Municipal Light Plant has the right to refuse to connect the Facility in the event of improper Facility installation or if documentation for same is incomplete.
- 4) **Safe Operation and Maintenance.** The Interconnecting Customer shall be fully responsible to operate, maintain, and repair the Facility.
- 5) **Access and Control.** Concord Municipal Light Plant and other emergency personnel shall have access at all times to the outside-located, unlocked disconnect switch for the Facility. CMLP will have control such that it may open or close the required meter socket bypass.
- 6) **Disconnection.** The Customer shall be required to install a manual disconnect located on the line side, within 10 feet of the meter, and outside of the residence. Concord Municipal Light Plant may temporarily disconnect the Facility for planned or emergency work on Concord Municipal Light Plant’s electrical system.

Effective 4/24/15; supersedes 4/4/14 policy

- 7) **Metering.** All Facilities approved under this Agreement are required to meet the following conditions.
- a. The Interconnecting Customer shall furnish and install a meter socket, if necessary, and wiring in accordance with Massachusetts Electrical Code.
 - b. PV, Wind and Co-gen systems will require the installation of a detent meter (measures electricity flow to and from the CMLP system) by the Concord Municipal Light Plant. The Concord Municipal Light Plant will install an appropriate meter within ten business days of Concord Municipal Light Plant and Wiring Inspector authorization for Interconnection and Operation.
 - c. The generating facility must be inverter-based.
 - d. If a single-phase Customer-Generating Facility is to be connected to a transformer center tap neutral of a 240 volt service, the addition of the Customer-Generating Facility shall not create an imbalance between the two sides of the 240 volt service of more than 20% of nameplate rating of the service transformer.
 - e. If, at any time, any metering equipment is found to be inaccurate by a margin greater than that allowed under applicable criteria, rules and standards, CMLP shall cause such metering equipment to be made accurate or replaced. The cost to repair or replace the meter shall be borne by CMLP. Meter readings for the period of inaccuracy shall be adjusted so far as the same can be reasonably ascertained; provided, however, no adjustment prior to the beginning of the preceding month shall be made except by agreement of the Parties. Each Party shall comply with any reasonable request of the other concerning the sealing of meters, the presence of a representative of the other Party when the seals are broken and the tests are made, and other matters affecting the accuracy of the measurement of electricity delivered from the Facility. If either Party believes that there has been a meter failure or stoppage, it shall immediately notify the other.
- 8) **Net Metering.** All Facilities approved under this Agreement qualify for net metering, as approved by Concord Municipal Light Plant.
- a. **Definition.** "Net metering" means a system of metering electricity in which CMLP credits Customer generation which migrates to the CMLP distribution system when generation is greater than consumption at the Customer location.
 - b. **General Provisions**
 - i. CMLP will offer net metering to their customers who generate electricity on the Customer's side of the meter provided that the generating capacity of the customer's facility does not exceed ten kilowatts. Larger applications must be reviewed on a case-by-case basis.
 - ii. This policy is intended for use at residential properties only: specifically, owner occupied, single family/duplex homes.
 - iii. The Customer is solely responsible for securing and complying with all local permitting processes including zoning, electrical, building inspection, and any and all other special permits that may be required.
 - iv. Eligible generating sources include, but are not limited to: solar, wind, and micro-turbine units which simultaneously generate electricity and recover heat.
 - v. *Traditional gasoline or natural gas fired portable or permanently mounted emergency generators are explicitly excluded from this policy.*
 - c. **Price Credits**

The price paid by CMLP for electricity produced by the Customer-Generating Facility may vary with the type of generating facility at the discretion of CMLP. Please see our filed retail Residential Net Metering tariff at http://www.concordma.gov/pages/ConcordMA_LightPlant/CMLP_new_rates for the actual rate.

9) **Requirements for Inverter-Based Installations**

- a. CMLP's distribution circuits generally operate with automatic re-closers, which activate following a trip without regard to whether the Facility is keeping the circuit energized. The Interconnecting Customer is responsible for protecting their equipment from being re-connected out of synch with CMLP's system.
- b. For Facilities that utilize photovoltaic (PV) technology, it is required that the system be installed in compliance with IEEE Standard 929-2000, "IEEE Recommended Practice for Utility Interface of (PV) Systems" or the applicable updated standard. The inverter shall meet the Underwriters Laboratories Inc. Standard UL 1741, "Static Inverters and Charge Controllers for Use in PV Power Systems" or the applicable updated standard. Based on the information supplied by the Interconnecting Customer, if CMLP determines the inverter is in compliance with UL 1741 or the applicable updated standard, the Interconnecting Customer's request for interconnection will be approved.
- c. For Facilities that utilize wind technology or other direct current energy sources and employ inverters for production of alternating current, the inverter shall meet the Underwriters Laboratories Inc. Standard UL 1741, "Static Inverters and Charge Controllers for Use in Photovoltaic Power Systems" or the applicable updated standard. Based on the information supplied by the Interconnecting Customer, if CMLP determines the inverter is in compliance with UL 1741, the Interconnecting Customer's request for interconnection will be approved.
- d. The following information must be submitted by the Interconnecting Customer for review and acceptance by CMLP prior to CMLP's approving the Interconnecting Customer's request for interconnection:
 - The make, model and manufacturer's specification sheet for the inverter and solar panels.

- 10) **Protection Requirements.** If, due to the interconnection of the Facility, when combined with pre-existing facilities interconnected to CMLP's system, the rating of any of CMLP's equipment or the equipment of others connected to CMLP's system will be exceeded or its control function will be adversely affected, CMLP shall have the right to require the Interconnecting Customer to pay for the purchase, installation, replacement or modification of equipment to eliminate the condition. Where such action is deemed necessary by CMLP, CMLP will, where possible, permit the Interconnecting Customer to choose among two or more options for meeting CMLP's requirements as described in this Protection Policy.
- 11) **Indemnification.** Interconnecting Customer and Concord Municipal Light Plant shall each indemnify, defend and hold the other, its officers, employees and agents (including, but not limited to, affiliates, contractors and their employees), harmless from and against all liabilities, damages, losses, penalties, claims, demands, suits and proceedings of any nature whatsoever for personal injury (including death) or property damage to unaffiliated third parties that arise out of, or are in any manner connected with, the performance of this Agreement by that party, except to the extent that such an injury or damages to unaffiliated third parties may be attributable to the negligence or willful misconduct of the party seeking indemnification.
- 12) **Limitation of Liability.** Each party's liability to the other party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either party be liable to the other party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever.
- 13) **Force Majeure.** An event of Force Majeure means any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any curtailment, order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond either party's control. A Force Majeure event does not include an act of negligence or intentional wrongdoing. Neither CMLP nor the Interconnecting Customer will be considered in default as to any obligation under Interconnection Requirements if prevented from fulfilling the obligation due to an event of Force Majeure. However, a party whose

performance is hindered by an event of Force Majeure shall make all reasonable efforts to perform its obligations under these Interconnection Requirements.

14) **Termination.** This Agreement may be terminated under the following conditions:

- a) **By Mutual Agreement.** The Parties agree in writing to terminate the Agreement.
- b) **By Interconnecting Customer.** The Interconnecting Customer may terminate this Agreement by providing the Concord Municipal Light Plant written notice at least 30 days prior to the termination.
- c) **By the Concord Municipal Light Plant.** The Concord Municipal Light Plant may terminate this Agreement if the Facility fails to operate for any consecutive 6 month period, or if the Facility impairs the operation of the electric distribution system or service to other customers or materially impairs the local circuit and the Interconnecting Customer does not cure the impairment.

15) **Assignment/Transfer of Ownership of the Facility.** This Agreement shall survive the transfer of ownership of the Facility to a new owner when the new owner agrees in writing to comply with the terms of this Agreement and so notifies Concord Municipal Light Plant.